CITY OF NATIONAL CITY

SANITARY
SEWER OVERFLOW EMERGENCY
RESPONSE PLAN

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SECTION 1: PURPOSE

The City of National City (City) has developed a Sanitary Sewer Overflow Emergency Response Plan (SSOERP) in order to protect public health and safety and the environment in the event of a sanitary sewer overflow (SSO). This SSOERP is written in accordance with the following regulations:

1. State Water Resources Control Board (SWRCB) Order 2006-003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (SSSWDR)
2. Regional Water Quality Control Board (RWQCB) Order R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*
3. SWRCB Order WQ 2008-0002-EXEC, *Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*
4. SWRCB Order WQ 2013-0058-EXEC, *Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*

The City takes all feasible steps to prevent SSOs from its collection system. However, if an SSO does occur the City makes every effort to contain the spill and mitigate the impacts of it. The City strives to prevent any wastewater from ultimately discharging to a receiving water body. This SSOERP provides City staff with the necessary direction and guidance to ensure a prompt and effective SSO response.

SECTION 2: BACKGROUND

The SSSWDR defines a sanitary sewer overflow to include any overflow, spill, release, discharge, or diversion of sewage from a wastewater collection system. SSOs include:

- Release of untreated or partially treated sewage that reaches waters of the United States;
- Release of untreated or partially treated sewage that does not reach waters of United States;
- Sewage backups into buildings and private property that are caused by blockages or flow conditions in the publicly owned portion of the sewer system.

SWRCB Order WQ 2006-003-DWQ categorized SSOs as follows:

1. Category 1: All discharges of sewage resulting from a failure in the City's sanitary sewer system that:
    - Equal or exceed 1000 gallons or;
    - Result in a discharge to a drainage channel and/or surface water; or
    - Discharge to a storm drainpipe that was not fully captured and returned to the sewer system
2. Category 2: All other discharges of sewage resulting from a failure in the City's sanitary sewer system.
3. Private Lateral Sewage Discharges (PLSD): Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

The amendments set forth in SWRCB Order WQ 2013-0058-EXEC redefined SSO categories effective September 9, 2013:

1. Category 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that:
    - Reach surface water and/or reach a drainage channel tributary to a surface water; or
    - Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g. infiltration pit, percolation pond).
2. Category 2: Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
3. Category 3: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.
4. Private Lateral Sewage Discharge (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets.

All SSOs (Category 1, Category 2, Category 3, and PLSDs) are reported to the SWRCB using the online California Integrated Water Quality System (CIWQS). However, regulatory notification and reporting requirements vary based on the type of spill. See Section 4 "SSO Notification and Reporting Procedures" for more details.

SECTION 3: SSO RESPONSE PROCEDURES

Residents or City staff may report an SSO to Public Works. A written Work Request Form (Attachment 1) is generated based on the report and sewer staff are immediately dispatched to the site. Contact information for applicable personnel is listed below. It should be noted that at the time of this SSMP update, both the Street Maintenance and Wastewater Superintendent and the Sewer Crew Chief positions are vacant at the City. Responsibilities have been reassigned to the Director of Public Works and to sewer crew staff at the Director's discretion as appropriate until the positions are filled. It should also be noted that the City is anticipating to merge the Public Works and Engineering Departments in the near future. If the departments merge, the responsibilities of the Public Works Director will be reassigned to the City Engineer. Therefore, all references to responsibilities of the Public Works Director in this SSOERP also reference the City Engineer.

- DIRECTOR OF PUBLIC WORKS
  OFFICE (619) 336-4580
  DESK (619) 336-4587
- STREET MAINTENANCE AND WASTEWATER SUPERINTENDENT (Vacant)
  OFFICE (619) 336-4580
  DESK (619) 336-4586
- SEWER CREW CHIEF (Vacant)
  OFFICE (619) 336-4580

- SEWER MAINTENANCE WORKER
  RADIO #11, #13, and #14
- EQUIPMENT WORKER
  RADIO #21 and #22
- POLICE DEPARTMENT
  DISPATCHER (619) 336-4411
  SEWER PAGER (619) 896-2671
  STREET PAGER (619) 896-2766

An overview of the City's SSO response protocol is provided as Attachment 2. It is the responsibility of sewer staff to follow these standard response procedures:

A. GENERAL

1. Assess the situation upon arrival and confirm that an SSO has occurred. Contact the reporting party indicated on the Work Request Form if necessary for more information.
2. Notify the Public Works Director (or City Engineer) of all confirmed spills, both public spills and Private Lateral Sewer Discharges (PLSD), while onsite.
3. Take immediate steps to contain, mitigate, and cleanup the SSO using standard procedures and best practices. See sections below for procedural details.

B. SPILL CONTAINMENT

The primary objective of the spill response is to protect public health and safety and the environment. Every effort must be made to contain the spill and prevent wastewater from contaminating storm drains, drainage channels, or surface waters. This requires staff to complete the following measures during spill containment. These tasks are accomplished through a division of labor and many occur simultaneously.

1. Determine the immediate destination of the overflow (e.g. building, street, unpaved surface, storm drain, water body).
2. If suspicious substances or odors are present and may be hazardous, staff should call the Fire Department (Dial 911). Staff should await the direction of the Fire Department before continuing the SSO response.
3. Immediately contain the flow:
   - Use sand bags and other accessible BMPs to stop the flow and protect storm drains.
   - Direct the overflow to a low point if possible.
   - Recover the ponded material using the Vactor truck. Additional details on spill cleanup are in Section E.
4. Determine if the spill is public (caused by a failure in the City's line) or private (caused by conditions in a privately owned lateral). Refer to Section C "SSO Cause" for details.
5. Identify and request any additional City staff, contractors, or equipment necessary to stop the flow and contain it. Organize and put into action upon arrival.
6. Establish traffic control around the spill area and work zone. Contact the National City Police Department for assistance if the spill is in a high traffic area.
   - Dispatcher (619) 336-4411

- Sewer Pager (619) 896-2671
- Street Pager (619) 896-2766

7. Control perimeter of overflow site with appropriate barricades, cones, or vehicles to restrict access.
8. Estimate spill volume (see Attachment 3 "Methods for Estimating Spill Volume") to include on SSO Reporting Form (Attachment 4). See Section F "SSO Documentation for details.
9. Take pictures to document the spill. See Section F "SSO Documentation" for details.

C. SSO CAUSE

SSOs may be caused by problems in the City's line (public) or by conditions in a privately owned lateral (private). Public SSOs result from sewer main blockages or sewer main pipe failures. They may also be caused by pump station failures. Private SSOs result from private lateral blockages or private lateral pipe failures.

The City is entirely responsible for the containment and recovery of SSOs caused by issues with public sewer mains or pump stations. The City responds to and notifies the appropriate regulatory agencies of PLSDs (see Section 4), but it is the responsibility of the property owner to mitigate or repair any damages from a private SSO. The City will contain the spill if it reaches the public right-of-way and contact a plumbing company if the property owner or manager cannot be reached. The owner will be billed for the cost of the plumber and the City's operational costs in spill containment.

D. CORRECTION OF SSO CAUSE

Corrections of SSOs that result from issues with a public mainline, private lateral, force main leak, or pump station are discussed below. Proper spill containment (as previously described in Section B) applies to all spills.

PUBLIC MAINLINE

- Inspect the flow conditions in the upstream and downstream manholes to determine the location of the blockage.
- Relieve blockage by flushing and rodding.
- Divert pipe flows as necessary to allow for inspection by closed circuit television (CCTV).
- Bypass the affected manholes for prolonged blockages or pipe collapses. Bypassing can be done by high lining or by the use of temporary pipeline around the affected area to transport water to a parallel main.
- Complete proper spill cleanup (Section E) and SSO documentation (Section F).

PRIVATE LATERAL

- Notify property owner or manager of an SSO caused by the private lateral. Inform them that they are responsible for corrective actions and must call a licensed contractor immediately.
- If the property owner or manager cannot be reached, the City will contain the spill and attempt to relieve the stoppage following this SSOERP and then contact a plumbing

company if necessary. The owner will be billed for the cost of the plumber and the City's operational costs in spill containment and correction.

- Complete proper SSO documentation (Section F).

FORCE MAIN LEAK

- When a force main leak causes an SSO, it will be bypassed while emergency repairs are made to the pipeline. Bypassing can be done by high lining or by the use of temporary pipeline around the affected area to transport water to a parallel main.
- Repairs may be done by City staff or by a private contractor depending on the damage to the pipeline, location of leak, volume of overflow and the depth of the pipe.
- Complete proper spill cleanup (Section E) and SSO documentation (Section F).

PUMP STATION FAILURE

- Each pump station is fitted with an alarm system that alerts the National City police dispatchers in the event of a system failure. City staff or after hours stand-by crews will respond immediately after notification is received.
- Determine the cause of the pump failure.
- Mobilize staff and equipment to correct the problem and return the station to operation.
- If an SSO occurred, complete proper spill cleanup (Section E) and SSO documentation (Section F).

In the event of a power failure, all sewer staff will report to Public Works for assigned tasks. There are two (2) pump stations on the west side within the City's sewerage system. The northern station is located at 14th Street and Tidelands Avenue. The southern station is located at 24th Street (Bay Marina Drive) and Tidelands Avenue. Pump stations will be regularly inspected to note the level of wastewater within the wet wells. (It should be noted that the wells have sufficient storage capacity for several days without power.) Additionally, manholes at sea level or below that could fill during a power outage will be periodically checked. If pumping is necessary, the City maintains a generator at the Public Works yard that can be transported to the stations, along with pumping connections.

E. SSO CLEANUP

SSO sites are thoroughly cleaned as soon as possible. It is important that no residue remain from the SSO that could be transported by future rains or could result in human contact. Site restoration is accomplished through the following steps:

1. If spill containment led to SSO ponding, vacuum the ponded wastewater and return it to the wastewater system.
2. Wash down all spill areas. Recover the wash water and return it to the wastewater system.
3. Flush, rake, or pick up solids and debris with the Vactor truck and bring them to the Public Works yard to dry. Waste management will transport the dried solids to the landfill.
4. Disinfect the SSO site with bleach or another disinfectant. Recover the wash water and return it to the wastewater system.

5. Take pictures to document the restoration efforts.

F. SSO DOCUMENTATION

Applicable records shall be maintained by the City for a **minimum of five (5) years** and shall be made available for review by the Water Boards during an onsite inspection or through an information request. These include work request forms, SSO reporting forms, and any other compliance documentation.

Work Request Form

A written Work Request Form (Attachment 1) is completed when an SSO is reported to Public Works. A description of the problem and the actions taken by Public Works is completed at the bottom of the form following the Public Works response. This form ensures that sewer incidents are appropriately categorized and directs SSO documentation and reporting as necessary. If a sanitary sewer leak, spill or overflow occurred, staff confirm that the Director of Public Works (or City Engineer) has been notified and are instructed to complete the SSO Reporting Form.

Work Request Forms are kept on file at the City for at least five (5) years.

SSO Reporting Form

The SSO Reporting Form (Attachment 4) follows the outline of incident information as presented in the California Integrated Water Quality System (CIWQS) online reporting form. It is organized into sections for background information, spill location, initial observations, spill details, spill response, and notification. Sections that need to be completed by field staff and those that can be completed by office staff are identified. This organization ensures that all information required by CIWQS is recorded in a way that facilitates data entry. Additional oversight by supervisory staff in Section F of the form ensures that the spill is properly categorized.

Applicable sections of the SSO Reporting Form are completed onsite, including an estimate of the spill volume (see Attachment 3 "Methods for Estimating Spill Volume"). SSO reporting forms are submitted to the Director of Public Works (or City Engineer) immediately following a spill. The reporting form is reviewed and finalized by the Director of Public Works (or City Engineer).

SSO Reporting Forms are kept on file at the City for at least five (5) years.

Photographs

Photos may be taken of SSOs during spill containment procedures and following spill cleanup. Photos are archived by the Director of Public Works (or City Engineer).

California Integrated Water Quality System (CIWQS)

Details on the requirements for SSO entry into CIWQS is provided in Section 4 "SSO Notification and Reporting Procedures". It should be noted that if CIWQS becomes unavailable for any reason, reporting timelines must still be met and information should be faxed or emailed to the San Diego RWQCB. Attachment 7 (RWQCB Form) may be used. The City would then enter the data into CIWQS as soon as possible.

G. POSTING

When public health may be at risk, it becomes necessary to post signs warning of contamination in appropriate locations. The San Diego County Department of Environmental Health Services (SDCDEH) will direct the closure of beach areas and the posting of warning signs. The City will

provide assistance to the SDCDEH as requested and the Director of Public Works (or City Engineer) will keep in contact with the SDCDEH until warning signs are removed. The SSO Reporting Form (Attachment 4) includes a question to address posting of health warnings.

H. WATER QUALITY MONITORING

As identified on the City's SSO Response Flowchart (Attachment 2) and on the SSO Reporting Form (Attachment 4), spills that reach a drainage channel and/or creek, river, bay, or other water body are subject to additional water quality monitoring requirements. The types and frequency of the testing to be performed is generally based on the estimated volume of the SSO and the affected or potentially affected body of water. Water quality sampling must be conducted **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.

D-MAX Engineering, Inc. sampling staff are available on-call to respond to spills when requested by the City, in accordance with the procedures on the response flowchart and reporting form. For SSOs that reach surface waters, monitoring and testing activities will include the following steps:

1. Trained staff will gather representative samples upstream and downstream of any location where SSO reached a receiving water body, as well as at the location where the SSO entered the water. Sampling will consider spill travel time in the surface water and areas where monitoring may not be possible.
2. Trained staff will collect all samples using proper sampling procedures. This includes documentation of proper maintenance and calibration of monitoring instruments and devices.
3. Log the sample location, time, and water temperature on the chain of custody form.
4. An accredited or certified laboratory will analyze the samples for selected constituents, which may include:
    - Ammonia;
    - Bacterial Indicators (Total and Fecal Coliform, Enterococcus, and E. coli);
    - Biochemical Oxygen Demand (BOD);
    - Dissolved Oxygen (DO); and
    - Total Suspended Solids (TSS)

    It should be noted that **within 48 hours** of becoming aware of the Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters, water quality sampling, must, at a minimum, include ammonia and the appropriate bacterial indicator(s) per the Basin Plan water quality objective or the Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.
5. Conduct additional sampling requirements as imposed by the San Diego County Department of Environmental Health (SDCDEH) and/or the San Diego Regional Water Quality Control Board (RWQCB).

Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. Water sampling results may be sent to the SDCDEH and the San Diego RWQCB as well as to other regulatory agencies as directed.

SECTION 4: SSO NOTIFICATION AND REPORTING PROCEDURES

The City has a responsibility to report and monitor all spills in accordance with the regulatory requirements. The chain of communication for reporting SSOs is generally summarized below. All SSOs (Category 1, Category 2, Category 3, and PLSDs) are reported to the SWRCB using the online California Integrated Water Quality System (CIWQS). However, regulatory notification and reporting requirements vary based on the type of spill. Additional details are provided in the response and reporting flowcharts in Attachments 2 and 5.

1. Reports of SSOs are received by the Public Works front desk. A work order form is generated using the City's Work Request Form (Attachment 1) and appropriate sewer personnel are dispatched to the site.
2. Sewer staff respond to the spill. Staff notify the Public Works Director (or City Engineer) of all confirmed spills, both public spills and Private Lateral Sewer Discharges (PLSD), while onsite.
3. The sewer crew lead records spill-related information (e.g. spill volume) while onsite and completes the SSO Reporting Form (Attachment 4).
4. The Public Works Director (or City Engineer) reports the spill per methods and timelines outlined on the SSO Reporting Flowchart (Attachment 5) and reviews the SSO Reporting Form.
5. Regulatory reporting requirements based on the type of discharge are outlined below (as presented in the SSO Reporting flowchart).

PUBLIC SSOs

I. **Category 1 -** Discharges of **any volume** that reach surface water and/or reach a drainage channel tributary to a surface water or reach a MS4 and are not fully captured and disposed of properly.

(1) For any Category 1 SSO **greater than or equal to 1,000 gallons**, the Public Works Director (or City Engineer) will notify the California Office of Emergency Services (Cal OES) at (800) 852-7550 and obtain a notification control number as soon as possible, but **no later than two (2) hours** after becoming aware of the discharge, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures.

- Spill information requested by Cal OES may include:
  - Name and direct return phone numberEstimated SSO volume discharged (gallons)
  - If ongoing, estimated SSO discharge rate (gallons per minute)
  - SSO Incident Description:
    - Brief narrative
    - On-scene point of contact for additional information (name and cell phone number)
    - Date and time enrollee became aware of SSO
    - Name of sanitary sewer system agency causing SSO
    - SSO cause (if known)
  - Indication of whether the SSO has been contained
  - Indication of whether surface water is impacted
  - Name of surface water impacted by SSO, if applicable
  - Indication of whether a drinking water supply is or may be impacted by SSO
  - Any other known SSO impacts
  - SSO incident location (address, city, state, and zip code)
- If applicable, the Director of Public Works (or City Engineer) will update Cal OES of any substantial changes to the estimated spill volume or any substantial change(s) to known impact(s) during the time between initial notification and SSO report certification.

(2) If the discharge is **greater than or equal to 50,000 gallons:**

- Water quality sampling will be conducted **within 48 hours** after initial SSO notification. Water quality results will be uploaded into CIWQS by the Public Works Director (or City Engineer).
- The Public Works Director (or City Engineer) will submit an SSO Technical Report in CIWQS **within 45 calendar days** of the SSO end date. See Order 2013-0058-EXEC (Section B, Notification Requirements, Number 5, SSO Technical Report) for details on the report submission.

(3) Draft CIWQS reports will be completed by the Public Works Director (or City Engineer) within **three (3) business days** of becoming aware of the SSO. If CIWQS is not working, all required information will be faxed or emailed to the RWQCB within the time-frame. Attachment 7 (RWQCB form) may be used.

(4) All CIWQS reports will be finalized and certified by the Public Works Director (or City Engineer) within **15 calendar days** of the SSO end date.

II. **Category 2** – Discharges of **1,000 gallons or greater** that do **NOT** reach surface water, a drainage channel, or a MS4 unless the entire SSO is fully recovered and disposed of properly.

(1) **Within 24 hours**, the Public Works Director (or City Engineer) will report the spill to the San Diego RWQCB and provide details either by email or fax.

(2) Draft CIWQS reports will be completed by the Public Works Director (or City Engineer) within **three (3) business days** of becoming aware of the SSO. If CIWQS is not working, all required information will be faxed or emailed to the RWQCB within the time-frame. Attachment 7 (RWQCB form) may be used.

(3) All CIWQS reports will be finalized and certified by the Public Works Director (or City Engineer) within **15 calendar days** of the end date of the SSO.

III. **Category 3** – Discharges of less than 1,000 gallons that do **NOT** reach surface water, a drainage channel, or a MS4 unless the entire SSO is fully recovered and disposed of properly.

(1) The Public Works Director (or City Engineer) will report and certify the spill using CIWQS **within 30 calendar days** after the end of the calendar month in which the spill occurred.

PRIVATE SSOs

I. **Private Lateral Sewage Discharge (PLSD)** – Discharges resulting from blockages or other problems within a privately owned sewer lateral.

It should be noted that the following reporting guidelines come from RWQCB Order R9-2007-0005. SWRCB Order WQ 2013-0058-EXEC states that the amended monitoring requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

For PLSDs that are:

- **Discharges of sewage to a drainage channel or surface water or to the storm drain system that could not be completely recovered.** ***OR***
- **Discharges of sewage equal to or greater than 1,000 gallons.**

(1) The Director of Public Works (or City Engineer) will notify Cal OES at (800) 852-7550 if the spill is **greater than or equal to 1,000 gallons AND discharged to a surface water** or may discharge to a surface water.

(2) The Public Works Director (or City Engineer) will notify the San Diego RWQCB by email or fax as soon as possible, but **no later than 24 hours** after becoming aware of the discharge.

(3) If the spill is considered a public health or environmental hazard, the Public Works Director (or City Engineer) will contact other applicable agencies, including the County Department of Environmental Health.

(4) The Public Works Director (or City Engineer) will report the spill using CIWQS **within 30 days** after the end of the calendar month in which the spill occurred.

For PLSDs that are:

- **Discharges of sewage less than 1,000 gallons that did NOT discharge to a drainage channel or surface water and were completely recovered if they entered the storm drain.**

  (1) If the spill is considered a public health or environmental hazard, the Public Works Director (or City Engineer) will contact applicable agencies including the California Office of Emergency Services (Cal OES), the County Department of Environmental Health, and the San Diego RWQCB.

  (2) The Public Works Director (or City Engineer) will report the spill using CIWQS **within 30 days** after the end of the calendar month in which the spill occurred.

ADDITIONAL REPORTING REQUIREMENTS

Collection System Questionnaire

The Public Works Director (or City Engineer) will update and certify the collection system questionnaire in CIWQS every 12 months.

"No Spill" Certification

If there are no SSOs during the calendar month, the Public Works Director (or City Engineer) will either 1) certify, within 30 calendar days after the end of the calendar month, a "No Spill" certification statement in CIWQS, or 2) certify, quarterly within 30 calendar days after the end of each quarter, a "No Spill" certification statement in CIWQS. For quarterly reporting, the quarters are Q1-January/February/March, Q2-April/May/June, Q3-July/August/September, and Q4-October/November/December.

It should be noted that if there are **no public SSOs** during a calendar month but the Public Works Director (or City Engineer) reported a PLSD, the Public Works Director (or City Engineer) will still certify a "No Spill" certification statement for that month (per Order 2013-0058-EXEC).

Information Required for CIWQS Draft and Certified Reports

A list of mandatory information required for submission in the draft and certified reports (for SSO Categories 1, 2, and 3) is presented on pages 7-8 of Order 2013-0058-EXEC.

Multiple Appearance Points

If one SSO event results in multiple appearance points in a sewer system asset, the Public Works Director (or City Engineer) will only complete one (1) SSO report which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

Amended SSO Reports

The Public Works Director (or City Engineer) will update or add information, if necessary, to a certified SSO report within 120 calendar days after the SSO end date by amending the report or adding an attachment to the SSO report in the CIWQS database.

SSO Technical Report

The Public Works Director (or City Engineer) will submit an SSO Technical report in the CIWQS database within 45 calendar days of the end of the SSO date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report shall include at a minimum the following:

i. Causes and Circumstances of the SSO:
   - Complete and detailed explanation of how and when the SSO was discovered.
   - Diagram showing the SSO failure point, appearance point(s), and final destination(s).
   - Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
   - Detailed description of the cause(s) of the SSO
   - Copies of the original field crew records used to document the SSO.
   - Historical maintenance records for the failure location.

ii. City's Response to SSO:
   - Chronological narrative description of all actions taken by the City to terminate the spill.
   - Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
   - Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

iii. Water Quality Monitoring:
   - Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
   - Detailed location map illustrating all water quality sampling points.

Regulatory Contact Information

Contact information for the California Office of Emergency Services (Cal OES), the San Diego County Department of Environmental Health, and the San Diego RWQCB is provided in Attachment 6. Contacts for adjacent jurisdictions are also provided so that any issues discovered in other jurisdictions can be promptly referred.

Certification

All information required to be reported into the CIWQS online database will be certified by Public Works Director (or City Engineer), who is the Legally Responsible Official (LRO). Any change to the registered LRO shall be submitted by the City to the State Water Board within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.

SECTION 5: TRAINING

The City recognizes the importance of consistent staff training and documentation of training sessions. The City's wastewater staff is trained on emergency response plan procedures, safety policies, and equipment. The Director of Public Works is responsible for documenting the details of each training event including dates, content, and participating employees. A sample training template is provided as Attachment 8. Training components include the following:

- New wastewater hires or staff transferred from another group in Public Works receive a copy of and are trained on the City's SSOERP. A quick reference guide on how to use the SSOERP is included as Attachment 9.
- All wastewater and standby staff review the City's SSOERP at least semiannually and as necessary following an SSO event.
- Training on the SSOERP includes at least one scenario-based SSO emergency response simulation to ensure staff are properly trained and prepared in the event of an SSO. This training includes practical exercises in estimating SSO start times and calculating SSO volume spill and recovered (see Attachment 3).
- Annual training to assess after hours procedure and SSO response.
- Initial and recurrent training on the SSOERP is provided as necessary to outside contractors.
- Following each spill event, the City of National City Spill Review Committee composed of the Public Works Director (or City Engineer), Wastewater Superintendent (currently vacant), Sewer Crew Chief (currently vacant), and applicable sewer staff will meet to discuss the cause of the spill, procedural response of the sewer staff, regulatory and compliance documentation and to determine whether additional issues and/or resources need to be addressed to prevent the reoccurrence of the SSO or to better respond to the SSO in the future. Actions taken to prevent future SSOs are documented on the SSO Reporting Form (Attachment 4).

SECTION 6: ATTACHMENTS

Attachment 1: Work Request Form
Attachment 2: SSO Response Flowchart
Attachment 3: Methods for Estimating Spill Volume
Attachment 4: SSO Reporting Form
Attachment 5: SSO Reporting Flowchart
Attachment 6: Regulatory Agency and Adjacent Jurisdiction Contact Information
Attachment 7: RWQCB Fax Reporting Form
Attachment 8: Training Template
Attachment 9: SSOERP Quick Reference Guide

Attachment 1
Work Request Form

WORK REQUEST FORM

(PW FAX #336-4594)

Timestamp

DATE: _____

LOCATION: _____

_____

REPORTED PROBLEM: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

PERSON TO CONTACT/PHONE NUMBER: _____

_____

If this is a **sanitary sewer issue**, then indicate who the problem has been assigned to. They are responsible for completing the following questions and the SSO reporting form if applicable.

STAFF NAME: _____ DATE: _____/_____/_____

Answer Based On Field Visit:

Description of Problem / Action(s) Taken by PW: _____

_____

_____

Did a sanitary sewer leak, spill, or overflow occur? ☐ Yes ☐ No

Did PW Staff clean up a sewage leak, spill, or overflow? ☐ Yes ☐ No

If answered "Yes" to either of the above questions,

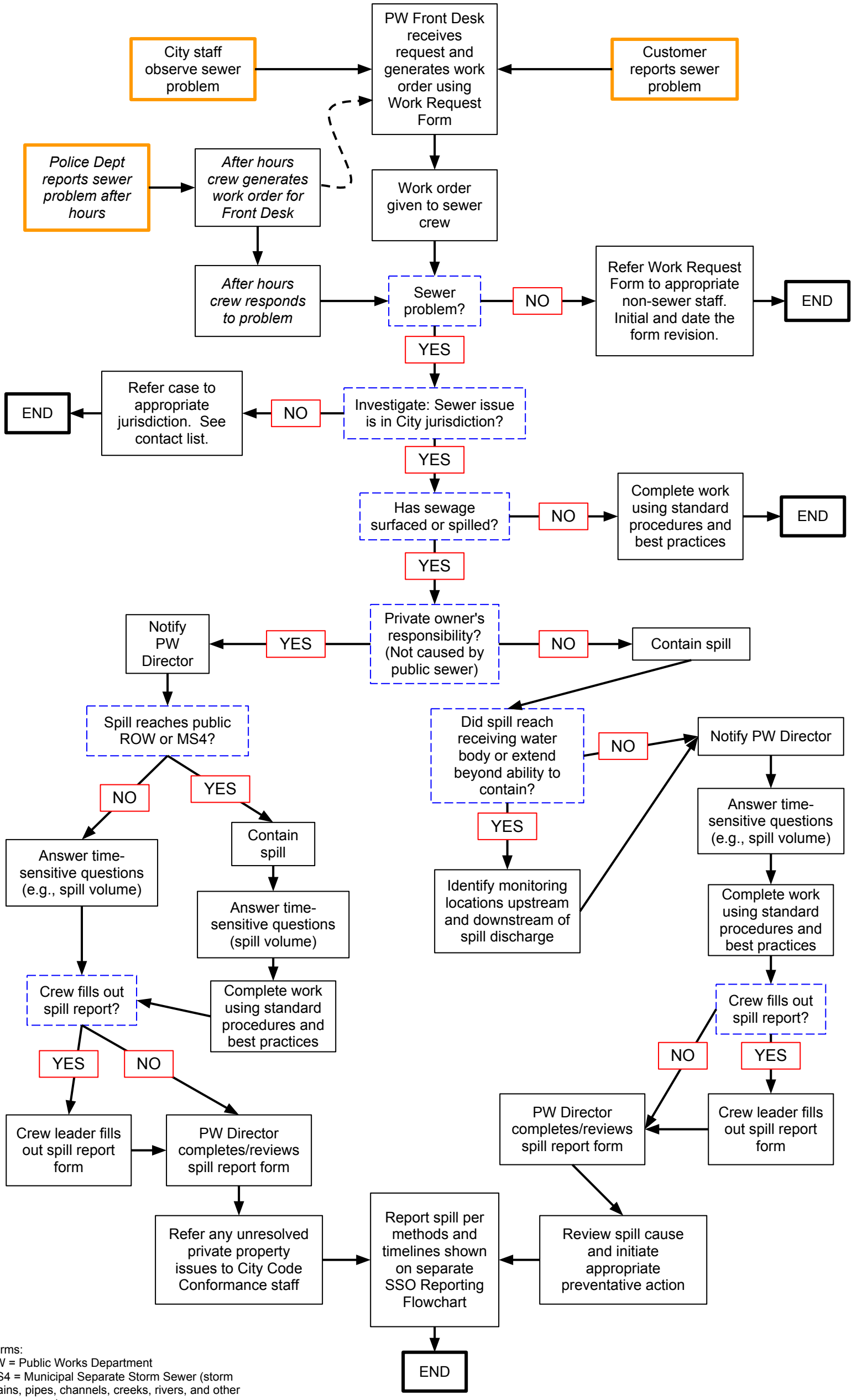
(1) Notify your immediate supervisor or Public Works Director. Date notified: ___/___/____

(2) Complete SSO reporting form and attach to this page.

Attachment 2
SSO Response Flowchart

City of National City Sanitary Sewer Overflow (SSO) Response Flow Chart

Created by D-Max Engineering, Inc. Last Revised 7/16/2012.



Terms:
PW = Public Works Department
MS4 = Municipal Separate Storm Sewer (storm drains, pipes, channels, creeks, rivers, and other conveyances)

Attachment 3
Methods for Estimating Spill Volume

METHODS FOR ESTIMATING SPILL VOLUME

There are a variety of methods to estimate the volume of a sanitary sewer overflow. The three methods that will most likely be used by the City of National City are presented below. The method most appropriate to the sewer overflow in question should be used by the person who is making the estimate. Every effort should be made to make the best possible estimate of the spill volume.

Method 1 --- Eyeball Estimate

The volume of small spills can be estimated using an "eyeball estimate." To use this method imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. **This method is useful for contained spills up to 100 gallons.**

Method 2 --- Measured Volume

The volume of most contained spills can be estimated using this method. The shape, dimensions, and the depth of the spilled wastewater are needed. Shape and dimensions are used to calculate the area of the spill and the depth is used to calculate the volume.

Step 1. Sketch the shape(rectangle, circle, triangle) of the contained sewage.

Step 2. Measure or pace off the dimensions (length, width, diameter, etc).

Step 3. Measure the depth at several locations and calculate an average (i.e. total of all depths measured divided by number of measurements taken).

Step 4. Convert the dimensions, including depth, to feet.

Step 5. Calculate the area using the following formulas:

Rectangle Area = length (feet) x width (feet)

Circle Area = 0.785 x diameter (feet) x diameter (feet)

Triangle Area = 0.5 x base (feet) x height (feet)

Step 6. Multiply the area (square feet) times the depth (in feet) to get volume (in cubic feet).

Step 7. Multiply the volume (cubic feet) by 7.5 to convert it to gallons.

Method 3 --- Duration and Flow Rate

Some spills do not pond at the site, but instead may flow into the storm drain system and receiving waterways. For such spills, you need to establish the time duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration: The duration is the amount of time elapsed from the time the spill started to the time the spill stopped.

Start time is sometimes difficult to establish. Here are some approaches:
Local residents can be used to establish start time. Inquire as to their observations.
Spills that occur in rights-of-way are usually observed and reported quickly. Spills that

occur out of the public view can go on longer. Sometimes observations like odors or sounds (e.g. water running in a normally dry creek bed) can be used to estimate the start time.

Changes in flow on a downstream flowmeter can be used to establish the start time. Typically the daily flow peaks are "cut off" or flattened by the loss of flow. This can be identified by comparing hourly flow data, when available.

Conditions at the spill site change with time. Initially there will be limited deposits of grease and toilet paper. After a few days to a week, the grease forms a light colored residue. After a few weeks to a month the grease turns dark. In both cases the quantity of toilet paper and other materials of sewage origin increase in amount. These changes with time can be used to estimate the start time in the absence of other information.

End time is usually much easier to establish. Field crews on-site observe the "blow down" that occurs when the blockage has been removed. The "blow down" can also be observed in downstream flowmeters.

Flow Rate: The flow rate is the average flow that left the sewer system during the time of the spill. There are three ways to estimate the flow rate:

San Diego Manhole Flow Rate Chart: This chart shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rate from the chart.

Flowmeter: Changes in flows in the downstream flowmeters can be used to estimate the flow rate during the spill.

Estimate based on up-stream connections: Once the location of the spill is known, the number of upstream connections can be determined from the City sewer maps. Multiply the number of connection by 200 to 250 gallons per day per connection or 8-10 gallons per hour per connection.

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days times the flow rate in gallons per hour or gallons per day. That is,

Volume of spill = duration (in hours or days) x flow rate (in gallons/hour or gallons/day)

Additional Information

The methods presented here have been adapted from the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region requirements for reporting Sanitary Sewer Overflows (SSO) as shown at http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/sso%20reporting%20requirements%20nov%2011%202004.pdf. An online powerpoint presentation provided by the Southern California Alliance of Publicly Owned Treatment Works at http://38.106.5.63/Modules/ShowDocument.aspx?documentid=12538 and the City of San Diego Sewer Overflow Response and Tracking Plan (Appendix 17 of the City's JURMP) at http://www.sandiego.gov/stormwater/pdf/jurmpapp17.pdf were also reviewed to prepare this spill volume estimation handout.

City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160

5 gpm

25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Attachment 4
SSO Reporting Form

CITY OF NATIONAL CITY
SANITARY SEWER OVERFLOW (SSO) REPORTING

Staff name: _____ Date: _____/_____/_____

See SSO Response Flow Chart. Complete information ASAP. (*Only italicized questions may be completed later by office staff.)*

A. BACKGROUND INFORMATION

1. Did a sanitary sewer leak, spill, or overflow occur? ☐ Yes ☐ No

> ***If you answered "no" to the above question, you do NOT need to complete this SSO form.***
> ***If you answered "yes", please continue to answer all questions, whether public or private.***

2. Was the spill caused by conditions within the public sewer? ☐ Yes ☐ No
3. Or, was the spill a private lateral spill? ☐ Yes ☐ No

Name of the responsible party (if known): _____
(Please also record the names, phone numbers, and organizations of all involved parties on the Work Request Form.)

Was the case referred to City Code Conformance Staff? ☐ *Yes* ☐ *No*

If yes, date referred: _____/_____/_____

B. SPILL LOCATION

Spill address: _____ Suite/Apt: _____

Latitude: _____ (decimal degrees) Longitude _____ (decimal degrees)

C. INITIAL OBSERVATIONS

1. Where did you **first see** wastewater on the spill site?

☐ Building/Structure ☐ Other Sewer Structure (e.g. lateral, cleanout) ☐ Manhole
☐ Force Main ☐ Gravity Sewer ☐ Pump Station ☐ Other _____

2. Did the spill reach a drainage channel and/or creek, river, bay or other water body? ☐ Yes ☐ No

> ***If you answered "yes", notify your supervisor to request water quality monitoring.***

Notification Date_____/_____/_____

3. Did the spill reach a storm drain pipe? ☐ Yes ☐ No

If "yes", was all of the wastewater captured from the storm drain and returned to the sewer system?

> *If applicable, indicate this as a spill response effort in Question E.1.*

☐ Yes ☐ No

4. Mark all areas that wastewater **flowed through** or **reached**.

☐ Building/Structure ☐ Street/Curb and Gutter ☐ Other Paved Surface, including parking lots
☐ Unpaved Surface ☐ Storm Drain ☐ Creek, River, Bay, or other Water Body (Surface Water)
☐ Other _____

> *If the spill reached a channel that is part of the MS4 and not a receiving water body, check "other" and write MS4 channel.*

5. Were photos taken? ☐ Yes ☐ No

D. SPILL DETAILS

1. Estimated spill volume: _____ gallons

> *Volume estimates may be eyeballed for less than 100 gallons, measured using the spill area and depth, or calculated using the spill duration and flow. See spill volume estimation handout for details.*

2. Estimated volume of spill **recovered**: _____ gallons

> *If applicable, indicate this as a spill response effort in Question E.1.*

3. Estimated spill **START** date/time Date: _____/_____/_____ Time: _____

4. Date/time Public Works was notified of or discovered spill:

> *This information can be taken directly from the PW work request form.*

Date: _____/_____/_____ Time: _____

5. Estimated Public Works arrival date/time: Date: _____/_____/_____ Time: _____

6. Estimated spill **END** date/time: Date: _____/_____/_____ Time: _____

7. Mark all **causes** of the spill below.

☐ Grease Deposition-FOG ☐ Root intrusion ☐ Debris

☐ Pipe Structural Problem/Failure ☐ Flow exceeded capacity ☐ Pump Station Failure

☐ Vandalism ☐ Operator Error ☐ Other _____

8. Where did the sewer failure **occur**?

☐ Upper lateral ☐ Lower lateral ☐ Main ☐ Other_____

Upper laterals usually connect to the building and extend to the property line (private). Lower laterals run from the property line to the sewer main (public). This answer should be consistent with the answer to Question A.3.

E. SPILL RESPONSE

1. Mark all **spill response efforts** that were started.

☐ Cleaned-up ☐ Contained all or portion of SSO ☐ Returned all or portion of SSO to sewer

☐ Restored flow ☐ Inspected sewer using CCTV ☐ Other _____

Spill response completed *Date_____/_____/_____* *Time_____*

2. *Were any health warnings posted?* ☐ *Yes* ☐ *No*

3. Mark all water bodies that were impacted by the spill.

☐ Seventh Street Channel ☐ Paradise Creek ☐ Sweetwater River ☐ San Diego Bay ☐ N/A

4. *Is there an ongoing investigation?* ☐ *Yes* ☐ *No*

Water Quality Monitoring:

5. *Mark all constituents that the spill **water quality samples** were analyzed for.*

☐ *Not applicable to this spill / No water quality samples taken* ☐ *Dissolved Oxygen*

☐ *Other chemical indicators (specify below)* ☐ *Biological indicators (specify below)* ☐ *Other (specify below)*

_____

6. *Mark all agencies that were sent water quality sample **test results**.*

☐ *Not applicable to this spill / No water quality samples taken* ☐ *County Health Agency* ☐ *RWQCB*

☐ *None* ☐ *Other* _____

7. Describe all **corrective actions** that were taken in response to the spill. (Beyond Question E.1)

_____

_____

_____

_____

Supervisor or PW Director may check appropriate boxes.

☐ *Enforcement action against FOG source* ☐ *Repaired sewer*

☐ *Adjusted schedule/method of preventative maintenance* ☐ *Plan rehabilitation or replacement*

☐ *Added sewer to preventative maintenance program* ☐ *Other* _____

F. REPORTING

Supervisor or PW Director will complete this reporting section.

☐ *Category 1 SSO* ☐ *Category 2 SSO* ☐ *Category 3 SSO* ☐ *Private Lateral Sewage Discharge*

Cal OES Notification Control Number (required for Category 1 discharges greater than or equal to 1,000 gallons):

_____

Date/time Cal OES notified of the spill? (required for Category 1 discharges greater than or equal to 1,000 gallons)

Date: ____/____/____ Time: _____

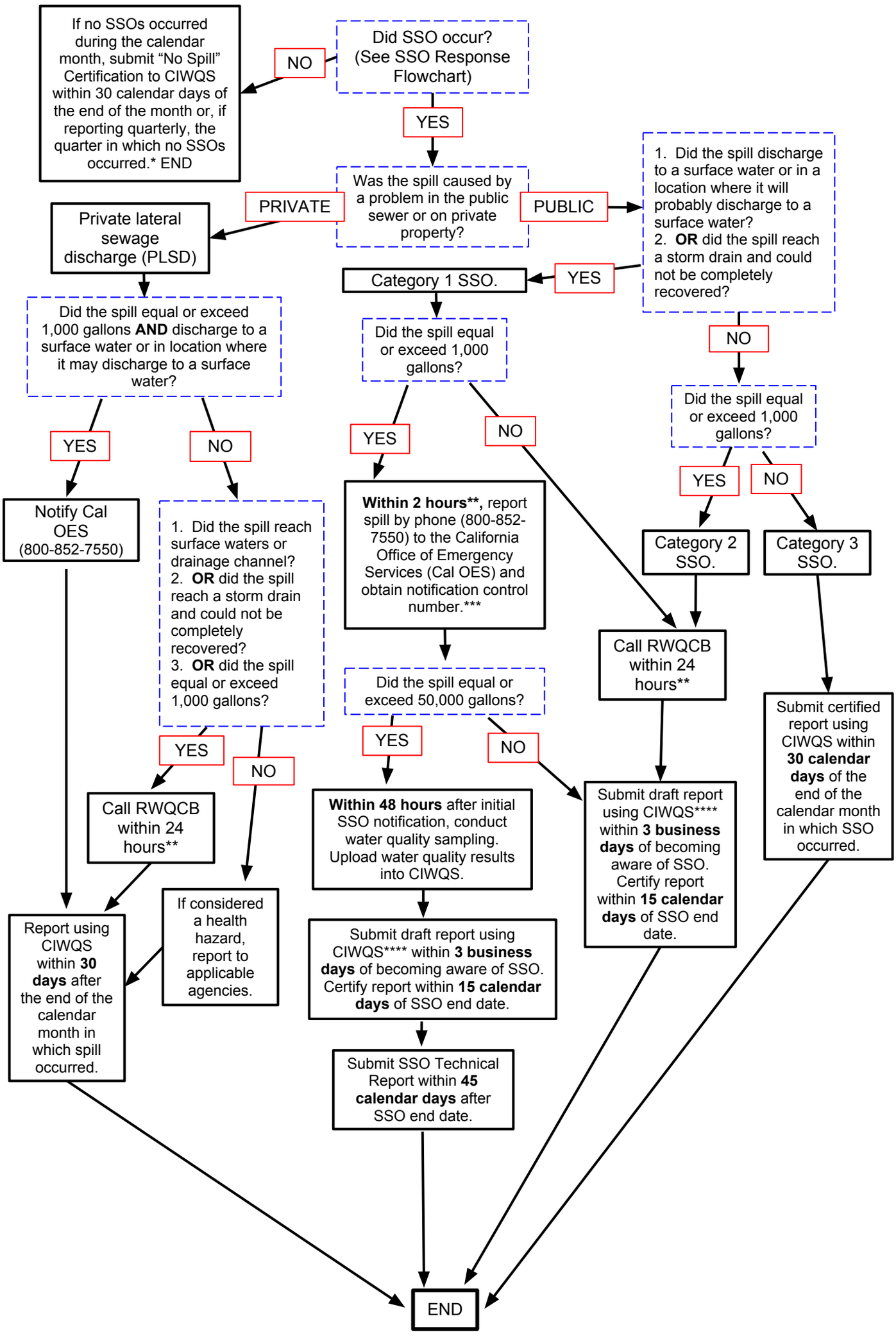
Date CIWQS report started: ____/____/____

Date CIWQS report certified: ____/____/____

Attachment 5
SSO Reporting Flowchart

City of National City Sanitary Sewer Overflow (SSO) Reporting Flow Chart

Created by D-Max Engineering, Inc. Last Revised 8/29/2013.



NOTES

*Per Order 2013-0058-EXEC, if there are no SSOs during a calendar month but a PLSD was reported, a "No Spill" certification statement for that month should still be submitted.

**After the Sewage Collection Agency becomes aware of the SSO, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures.

***If applicable, update Cal OES regarding substantial changes to the estimated volume of spill and any substantial changes to known impact(s) after initial notification and before SSO report is certified.

****If CIWQS is not available for any reason, information must be faxed or emailed to the San Diego RWQCB according to the timeframe.

Attachment 6
Regulatory Agency and Adjacent Jurisdiction Contact Information

Contact Information for SSO Reporting

Contact	Contact Agency	Business Hours	After Hours	Fax	Email	Required Info
Cal OES State Warning Center	California Office of Emergency Services (Cal OES)	(800) 852-7550	(800) 852-7550	N/A	N/A	Name and telephone number of person reporting; Name and address of facility; Time and type of incident; Name and quantity of hazardous material(s) involved; Extent of injuries; Possible hazard to human health and the environment outside the facility.
Ewan Moffat	San Diego County Department of Environmental Health	(858) 495-5579	(858) 565-5255	N/A	Ewan.Moffat@ sdcounty.ca.gov	Name and telephone number of person reporting; Name and address of facility; Time and type of incident; Name and quantity of hazardous material(s) involved; Extent of injuries; Possible hazard to human health and the environment outside the facility.
Christopher Means	San Diego Regional Water Quality Control Board	(858) 637-5581	(858) 822-8344	(858) 571-6972	RB9SSO@ waterboards.ca.gov	Name and telephone number of person reporting; service area; responsible party for spill; estimated spill volume; location; waterbody (if any); start date/time; end date/time; and confirmation of Cal OES and Health Dept notification.

Contact Information for Adjacent Jurisdictions

Jurisdiction	Contact	Business Hours	After Hours
County of San Diego	Dept Public Works Wastewater Office	(858) 514-4990	(858) 565-5255
City of Chula Vista	Public Works - Operations	(619) 397-6000	
City of Chula Vista	Police Department (non-emergency)		(619) 691-5151
City of San Diego	Sewer spill reporting	(619) 515-3525	
City of San Diego	Police Department (non-emergency)		(619) 531-2000
Port of San Diego	Environmental Management (Storm Drain)	(619) 686-6254	
Port of San Diego	Harbor Police Dispatch (spills to SD Bay)	(619) 686-6272	(619) 223-1133
Naval Base San Diego	Public Works Trouble Desk	(619) 556-1309	(619) 556-7349/7341

Attachment 7
RWQCB Fax Reporting Form

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD –
SANITARY SEWER OVERFLOW 24-HOUR NOTIFICATION REPORT FORM
FOR CATEGORY 1 SPILLS IN THE SAN DIEGO REGION
ORDER No. R9-2007-0005

If CIWQS is not working , the 3-day draft report may be faxed in using this form. Please provide the following information, if available.

RWQCB STAFF CONTACT _____

DATE OF NOTIFICATION ___ / ___ / ___ TIME OF NOTIFICATION __ __ : __ __ AM / PM

REPORTED BY _____ PHONE: (_____) _____

REPORTING AGENCY: _____

AGENCY ADDRESS: _____

RESPONIBLE PARTY (if not the Reporting Agency): _____ O

O PUBLIC SPILL O PRIVATE SPILL

ESTIMATED TOTAL SSO VOLUME (GALLONS): _____

ESTIMATED RECOVERED VOLUME (GALLONS): _____

LOCATION OF SSO: _____ START DAY/TIME:_____

_____ O CONTAINED O ON-GOING

CITY: _____ END DAY/TIME:_____

ZIP: _____

WATERS OF STATE IMPACTED? O YES O NO

STORM DRAIN: _____

PRIMARY SURFACE WATER: _____

SECONDARY SURFACE WATER: _____

OTHER IMPACTED WATER: _____

BEACH CLOSURE? O YES O NO LOCATION: _____

LOCAL HEALTH AGENCY NOTIFIED IMMEDIATELY? O YES O NO DATE/TIME _____

OFFICE OF EMERGENCY SERVICES NOTIFIED? O YES O NO DATE/TIME _____

OES CONTROL # _____

CAUSE / COMMENTS / OTHER DETAILS:

_____

_____

_____

Attachment 8

Training Log

Training Sign-In Sheet

Topic	
Date	
Presenter	

#	Name	Signature
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Attachment 9
SSOERP Quick Reference Guide

Quick Reference Guide for the Sanitary Sewer Overflow Emergency Response Plan (SSOERP)

This quick reference guide should serve as the first point of reference when in need of a reminder of SSO response and reporting procedures. The table below directs staff to the necessary information and identifies the location of it in the SSOERP for more details.

I need to…	Why?	Location in SSOERP
Review the SSO response procedure.	Standard SSO response procedures are followed for both public and private lateral spills.	**Attachment 2** *(SSO Response Flowchart)* Section 3: SSO Response Procedures
Assess who needs to be contacted about a spill.	The PW Director is notified of all SSOs (both public and private spills) while on site. Additional PW staff or personnel from other agencies may be called to aid in the SSO response effort.	Section 3: SSO Response Procedures
Estimate the spill volume.	The SSO Reporting Form records the total volume of the spill and the volume of the spill recovered. Volume estimates are completed while on site.	**Attachment 3** *(Methods for Estimating Spill Volume)*
Fill out an SSO report form.	All SSOs (both public and private lateral spills) require proper documentation. Reporting forms are turned in to the PW Director following spill response efforts.	**Attachment 4** *(SSO Reporting Form)* Section 3: SSO Response Procedures, F. SSO Documentation
Request water quality monitoring.	Any SSO that reaches a drainage channel and/or creek, bay, or other water body requires water quality monitoring. Notify the PW Director.	**Attachment 2** *(SSO Response Flowchart)* Section 3: SSO Response Procedures, H. Water Quality Monitoring
Report an SSO to a regulatory agency.	Regulatory notification and reporting requirements vary based on the type of spill. All SSOs (both public and private lateral spills) are reported by the PW Director to the State Water Resources Control Board (SWRCB) using an online system. Information is input using the completed SSO Reporting Form.	**Attachment 5** *(SSO Reporting Flowchart)* Section 4: SSO Notification and Reporting Procedures **Attachment 6** *(Regulatory and Adjacent Jurisdiction Contact Information)*
Report an SSO to another jurisdiction.	SSO is out of National City jurisdiction.	**Attachment 6** *(Regulatory and Adjacent Jurisdiction Contact Information)*